

Amendment to the Claims:

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-7 are cancelled without disclaimer or prejudice.

CLAIMS

8. (New) A method for gas stunning of animals for slaughter arriving at the slaughterhouse in transport crates, where gas stunning of the animals is achieved while the animals are still in the transport crates, and where the transport crates comprising the animals, are conveyed successively by means of conveyors through a stunning chamber, wherein an influence of the gas for stunning the animals is adjusted by shortening or prolonging a conveying time and/or a conveying route of the transport crates through the stunning chamber.

9. (New) A method according to claim 8, wherein an adjustment of the conveying time through the stunning chamber is achieved by increasing or reducing a speed of the conveyors.

10. (New) A method according to claim 8, wherein adjustment of the conveying route through the stunning chamber is achieved by lowering or lifting a substantially horizontal conveyor running herein, which conveyor provides for the conveying of the transport crates between a downwards running conveyor and an upwards running conveyor.

11. (New) A method according to claim 9, wherein adjustment of the conveying route through the stunning chamber is achieved by lowering or lifting a substantially horizontal conveyor running herein, which conveyor provides for the conveying of the transport crates between a downwards running conveyor and an upwards running conveyor.

12. (New) A method according to claim 8, wherein an influence of the gas for stunning the animals is adjusted by varying gas concentration at varying levels in the stunning chamber as increasing gas concentration is applied in a downwards direction in the stunning chamber.

13. (New) A method according to claim 9, wherein an influence of the gas for stunning the animals is adjusted by varying gas concentration at varying levels in the stunning chamber as increasing gas concentration is applied in a downwards direction in the stunning chamber.

14. (New) A method according to claim 10, wherein an influence of the gas for stunning the animals is adjusted by varying gas concentration at varying levels in the stunning chamber as increasing gas concentration is applied in a downwards direction in the stunning chamber.

15. (New) A method according to claim 11, wherein an influence of the gas for stunning the animals is adjusted by varying gas concentration at varying levels in the stunning chamber as increasing gas concentration is applied in a downwards direction in the stunning chamber.

16. (New) A system for gas stunning of animals for slaughter according to the method of claim 8 comprising a substantially horizontal conveyor which receives and introduces transport crates comprising the animals for slaughter into a gas-filled stunning chamber in which a downwards running conveyor is arranged, for successively conveying transport crates downwards in the stunning chamber, and an upwards running conveyor which is arranged for successively conveying the transport crates upwards out of the stunning chamber, wherein the downwards running conveyor comprises substantially vertical conveyors, each comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for downwards conveying of the transport crates in the stunning chamber, the upwards running conveyor comprises a substantially vertical conveyor comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for upwards conveying from the stunning chamber, and between the downwards and upwards running conveyors there is a substantially horizontal conveyor which provides horizontal conveying of the transport crates through the stunning chamber, which horizontal conveyor furthermore is lifted and lowered respectively between levels with varying gas concentrations in the stunning chamber.

17. (New) A system for gas stunning of animals for slaughter according to the method of claim 9 comprising a substantially horizontal conveyor which receives and introduces transport crates comprising the animals for slaughter into a gas-filled stunning chamber in which a downwards running conveyor is arranged, for successively conveying transport crates downwards in the stunning chamber, and an upwards running conveyor which is arranged for successively conveying the transport crates upwards out of the stunning chamber, wherein the downwards running conveyor comprises substantially vertical conveyors, each comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for downwards conveying of the transport crates in the stunning chamber, the upwards running conveyor comprises a substantially vertical conveyor comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for upwards conveying from the stunning chamber, and between the downwards and upwards running conveyors there is a substantially horizontal conveyor which provides horizontal conveying of the transport crates through the stunning chamber, which horizontal conveyor furthermore is lifted and lowered respectively between levels with varying gas concentrations in the stunning chamber.

18. (New) A system for gas stunning of animals for slaughter according to the method of claim 10 comprising a substantially horizontal conveyor which receives introduces transport crates comprising the animals for slaughter into a gas-filled stunning chamber in which a downwards running conveyor is arranged, for successively conveying transport crates downwards in the stunning chamber, and an upwards running conveyor which is arranged for successively conveying the transport crates upwards out of the stunning chamber, wherein the downwards running conveyor comprises substantially vertical conveyors, each comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for downwards conveying of the transport crates in the stunning chamber, the upwards running conveyor comprises a substantially vertical conveyor comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for upwards conveying from the stunning chamber, and between the downwards and upwards running conveyors there is a substantially horizontal conveyor which provides horizontal conveying of the transport crates through the stunning chamber, which horizontal conveyor furthermore is lifted and lowered respectively between levels with varying gas concentrations in the stunning chamber.

19. (New) A system for gas stunning of animals for slaughter according to the method of claim 11 comprising a substantially horizontal conveyor which receives introduces transport crates comprising the animals for slaughter into a gas-filled stunning chamber in which a downwards running conveyor is arranged, for successively conveying transport crates downwards in the stunning chamber, and an upwards running conveyor which is arranged for successively conveying the transport crates upwards out of the stunning chamber, wherein the downwards running conveyor comprises substantially vertical conveyors, each comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for downwards conveying of the transport crates in the stunning chamber, the upwards running conveyor comprises a substantially vertical conveyor comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for upwards conveying from the stunning chamber, and between the downwards and upwards running conveyors there is a substantially horizontal conveyor which provides horizontal conveying of the transport crates through the stunning chamber, which horizontal conveyor furthermore is lifted and lowered respectively between levels with varying gas concentrations in the stunning chamber.

20. (New) A system for gas stunning of animals for slaughter according to the method of claim 12 comprising a substantially horizontal conveyor which receives introduces transport crates comprising the animals for slaughter into a gas-filled stunning chamber in which a downwards running conveyor is arranged, for successively conveying transport crates downwards in the stunning chamber, and an upwards running conveyor which is arranged for successively conveying the transport crates upwards out of the stunning chamber, wherein the downwards running conveyor comprises substantially vertical conveyors, each comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for downwards conveying of the transport crates in the stunning chamber, the upwards running conveyor comprises a substantially vertical conveyor comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for upwards conveying from the stunning chamber, and between the downwards and upwards running conveyors there is a substantially horizontal conveyor which provides horizontal conveying of the transport crates through the stunning chamber, which horizontal conveyor furthermore is lifted and lowered respectively between levels with varying gas concentrations in the stunning chamber.

21. (New) A system for gas stunning of animals for slaughter according to the method of claim 13 comprising a substantially horizontal conveyor which receives introduces transport crates comprising the animals for slaughter into a gas-filled stunning chamber in which a downwards running conveyor is arranged, for successively conveying transport crates downwards in the stunning chamber, and an upwards running conveyor which is arranged for successively conveying the transport crates upwards out of the stunning chamber, wherein the downwards running conveyor comprises substantially vertical conveyors, each comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for downwards conveying of the transport crates in the stunning chamber, the upwards running conveyor comprises a substantially vertical conveyor comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for upwards conveying from the stunning chamber, and between the downwards and upwards running conveyors there is a substantially horizontal conveyor which provides horizontal conveying of the transport crates through the stunning chamber, which horizontal conveyor furthermore is lifted and lowered respectively between levels with varying gas concentrations in the stunning chamber.

22. (New) A system for gas stunning of animals for slaughter according to the method of claim 14 comprising a substantially horizontal conveyor which receives introduces transport crates comprising the animals for slaughter into a gas-filled stunning chamber in which a downwards running conveyor is arranged, for successively conveying transport crates downwards in the stunning chamber, and an upwards running conveyor which is arranged for successively conveying the transport crates upwards out of the stunning chamber, wherein the downwards running conveyor comprises substantially vertical conveyors, each comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for downwards conveying of the transport crates in the stunning chamber, the upwards running conveyor comprises a substantially vertical conveyor comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for upwards conveying from the stunning chamber, and between the downwards and upwards running conveyors there is a substantially horizontal conveyor which provides horizontal conveying of the transport crates through the stunning chamber, which horizontal conveyor furthermore is lifted and lowered respectively between levels with varying gas concentrations in the stunning chamber.

23. (New) A system for gas stunning of animals for slaughter according to the method of claim 15 comprising a substantially horizontal conveyor which receives introduces transport crates comprising the animals for slaughter into a gas-filled stunning chamber in which a downwards running conveyor is arranged, for successively conveying transport crates downwards in the stunning chamber, and an upwards running conveyor which is arranged for successively conveying the transport crates upwards out of the stunning chamber, wherein the downwards running conveyor comprises substantially vertical conveyors, each comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for downwards conveying of the transport crates in the stunning chamber, the upwards running conveyor comprises a substantially vertical conveyor comprising mutually interacting endless chain conveyors which support opposite sides of the transport crates for upwards conveying from the stunning chamber, and between the downwards and upwards running conveyors there is a substantially horizontal conveyor which provides horizontal conveying of the transport crates through the stunning chamber, which horizontal conveyor furthermore is lifted and lowered respectively between levels with varying gas concentrations in the stunning chamber.

24. (New) A system according to claim 16, wherein the stunning chamber is divided into horizontal zones, comprising a lower zone having a gas concentration approximately of 45-51%, an intermediate zone having a gas concentration approximately of 32-46%, and an upper zone having a gas concentration approximately of 8-10%, wherein sensors are provided for monitoring and control respectively of the gas concentration in the zones.

25. (New) A system according to claim 17, wherein the stunning chamber is divided into horizontal zones, comprising a lower zone having a gas concentration approximately of 45-51%, an intermediate zone having a gas concentration approximately of 32-46%, and an upper zone having a gas concentration approximately of 8-10%, wherein sensors are provided for monitoring and control respectively of the gas concentration in the zones.

26. (New) A system according to claim 18, wherein the stunning chamber is divided into horizontal zones, comprising a lower zone having a gas concentration approximately of 45-51%, an intermediate zone having a gas concentration approximately of 32-46%, and an upper zone having a gas concentration approximately of 8-10%, wherein sensors are provided for monitoring and control respectively of the gas concentration in the zones.

27. (New) A system according to claim 19, wherein the stunning chamber is divided into horizontal zones, comprising a lower zone having a gas concentration approximately of 45-51%, an intermediate zone having a gas concentration approximately of 32-46%, and an upper zone having a gas concentration approximately of 8-10%, wherein sensors are provided for monitoring and control respectively of the gas concentration in the zones.

28. (New) A system according to claim 20, wherein the stunning chamber is divided into horizontal zones, comprising a lower zone having a gas concentration approximately of 45-51%, an intermediate zone having a gas concentration approximately of 32-46%, and an upper zone having a gas concentration approximately of 8-10%, wherein sensors are provided for monitoring and control respectively of the gas concentration in the zones.

29. (New) A system according to claim 21, wherein the stunning chamber is divided into horizontal zones, comprising a lower zone having a gas concentration approximately of 45-51%, an intermediate zone having a gas concentration approximately of 32-46%, and an upper zone having a gas concentration approximately of 8-10%, wherein sensors are provided for monitoring and control respectively of the gas concentration in the zones.

30. (New) A system according to claim 22, wherein the stunning chamber is divided into horizontal zones, comprising a lower zone having a gas concentration approximately of 45-51%, an intermediate zone having a gas concentration approximately of 32-46%, and an upper zone having a gas concentration approximately of 8-10%, wherein sensors are provided for monitoring and control respectively of the gas concentration in the zones.

31. (New) A system according to claim 23, wherein the stunning chamber is divided into horizontal zones, comprising a lower zone having a gas concentration approximately of 45-51%, an intermediate zone having a gas concentration approximately of 32-46%, and an upper zone having a gas concentration approximately of 8-10%, wherein sensors are provided for monitoring and control respectively of the gas concentration in the zones.

32. (New) A system according to claim 16, wherein a PLC control system controls mutually dependent mechanical parameters of speed of vertical conveyors, number of transport crates in the stunning zones, a cycle of crates in the stunning zone, number of animals per crate, a speed of a slaughtering line and a speed cycle between crates in the stunning zone.

33. (New) A system according to claim 17, wherein a PLC control system controls mutually dependent mechanical parameters of speed of vertical conveyors, number of transport crates in the stunning zones, a cycle of crates in the stunning zone, number of animals per crate, a speed of a slaughtering line and a speed cycle between crates in the stunning zone.

34. (New) A system according to claim 17, wherein a PLC control system controls mutually dependent mechanical parameters of speed of vertical conveyors, number of transport crates in the stunning zones, a cycle of crates in the stunning zone, number of animals per crate, a speed of a slaughtering line and a speed cycle between crates in the stunning zone.

35. (New) A system according to claim 18, wherein a PLC control system controls mutually dependent mechanical parameters of speed of vertical conveyors, number of transport crates in the stunning zones, a cycle of crates in the stunning zone, number of animals per crate, a speed of a slaughtering line and a speed cycle between crates in the stunning zone.

36. (New) A system according to claim 19, wherein a PLC control system controls mutually dependent mechanical parameters of speed of vertical conveyors, number of transport crates in the stunning zones, a cycle of crates in the stunning zone, number of animals per crate, a speed of a slaughtering line and a speed cycle between crates in the stunning zone.

37. (New) A system according to claim 20, wherein a PLC control system controls mutually dependent mechanical parameters of speed of vertical conveyors, number of transport crates in the stunning zones, a cycle of crates in the stunning zone, number of animals per crate, a speed of a slaughtering line and a speed cycle between crates in the stunning zone.

38. (New) A system according to claim 21, wherein a PLC control system controls mutually dependent mechanical parameters of speed of vertical conveyors, number of transport crates in the stunning zones, a cycle of crates in the stunning zone, number of animals per crate, a speed of a slaughtering line and a speed cycle between crates in the stunning zone.

39. (New) A system according to claim 22, wherein a PLC control system controls mutually dependent mechanical parameters of speed of vertical conveyors, number of transport crates in the stunning zones, a cycle of crates in the stunning zone, number of animals per crate, a speed of a slaughtering line and a speed cycle between crates in the stunning zone.

40. (New) A system according to claim 23, wherein a PLC control system controls mutually dependent mechanical parameters of speed of vertical conveyors, number of transport crates in the stunning zones, a cycle of crates in the stunning zone, number of animals per crate, a speed of a slaughtering line and a speed cycle between crates in the stunning zone.